

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A communication system for forwarding a multicast packet transmitted from a source terminal to a destination terminal in accordance with predetermined forwarding paths, wherein

the forwarding paths include a plurality of multicast-capable routers and a plurality of multicast-incapable routers,

the plurality of multicast-capable routers include a non-branch router and a branch router, the non-branch router is connected to a single other multicast-capable router on the destination terminal side, and the branch router is connected to a plurality of other multicast-capable routers including the non-branch router on the destination terminal side,

the non-branch router comprises:

a message provider configured to generate a request message requesting deletion of an address of the non-branch router and requesting registration of an address of a register target multicast-capable router connected to the destination terminal side of the non-branch router; and

a forwarder configured to forward the request message to the branch router connected to the destination terminal side of the non-branch router;

the branch router comprises:

a forwarding destination holder configured to hold a table in which each address of the plurality of other multicast-capable routers is registered;

a forwarding destination register configured to update the table by deletion of the address of the non-branch router from the table and registration of an address of the register target multicast-capable router to the table, in accordance with receiving of the request message; and

a forwarding controller configured to generate a second encapsulated multicast packet in accordance with receiving a first encapsulated multicast packet generated by setting an address of the branch router to the multicast packet, and wherein

the forwarding controller is configured to generate the second encapsulated multicast packet by re-setting an address registered in the updated table to the multicast packet derived from the first encapsulated multicast packet

comprising:

a multicast-capable router including

a forwarding destination holder for holding a forwarding address to which a multicast-capable router forwards a multicast packet;

a forwarding destination register for registering an address of another multicast-capable router in the forwarding destination holder as the forwarding address while the address is associated with a source terminal address and a multicast group address; and

a router message provider for providing the source terminal address with a join request message which requests addition of the address of the multicast-capable router to a sending address to which the source terminal transmits the multicast packet; and a source terminal including

a sending destination holder for holding the sending address; and

a sending destination register for registering the address of the multicast-capable router in the sending destination holder as the sending address based on the join request message.

Claim 2 (Currently Amended): The communication system according to claim 1, wherein ~~the sending destination register~~ the source terminal registers, ~~in the sending~~

~~destination holder, the~~ an address of ~~the multicast-capable a branch~~ router most located on the
source terminal side ~~most upstream when the source terminal address is assumed to be~~
~~upstream in a multicast tree.~~

Claim 3-4 (Canceled).

Claim 5 (Currently Amended): The communication system according to claim ~~[[3]]~~
1, wherein the plurality of multicast-capable routers further includes the forwarding
~~destination register registers, in the forwarding destination holder, the forwarding address~~
~~associated with the source terminal address and the multicast group address, when the~~
~~multicast-capable router is to be~~ an edge router connecting to ~~[[a]]~~ the destination terminal,
and

the edge router holds a multicast group address added to a multicast group in which
the source terminal forwards the multicast packet.

Claim 6 (Currently Amended): The communication system according to claim ~~[[1]]~~ 5,
wherein the edge router transmits the multicast packet to the destination terminal by
multicast, based on the multicast group address included in the multicast packet as a
destination address comprising a forwarding controller for encapsulating the multicast packet
~~with the forwarding address when a destination address of the decapsulated multicast packet~~
~~is compared with the forwarding address held by the forwarding destination holder, and the~~
~~destination address is different from the forwarding address.~~

Claim 7 (Currently Amended): The communication system according to claim 1,
~~wherein the forwarding destination holder holds an address indicating a multicast address~~

~~group as the forwarding address, when the multicast packet is forwarded to the multicast-~~
~~capable router connecting to the~~ when each of the plurality of other multicast-capable routers
is connected to same subnetwork, the forwarding destination register is configured to register
a multicast group address to the table instead of the each address of the plurality of other
multicast-capable routers, the multicast group address is added to a multicast group in which
the source terminal forwards the multicast packet, and

when the multicast group address is registered in the table, the forwarding controller
is configured to transmit the multicast packet derived from the first encapsulated multicast
packet to each of the plurality of other multicast-capable routers by multicast.

Claim 8 (Currently Amended): The communication system according to claim 1,
comprising wherein

the plurality of multicast-capable routers further include an other branch router
located between the source terminal and the branch router,

when a router connected to the source terminal is changed from the other branch
router to the branch router by moving of the source terminal, the forwarding controller of the
branch router is configured to receive a third encapsulated multicast packet generated by
setting an address of the other branch router to the multicast packet and to generated fourth
encapsulated multicast packets by re-setting an address registered in the updated table and the
address of the other branch router to the multicast packet derived from the third encapsulated
multicast packet ~~a forwarding controller for performing control in a manner of forwarding the~~
~~multicast packet to the sending address before a change, when the source terminal address is~~
~~changed.~~

Claim 9 (Currently Amended): The communication system according to claim 1,
wherein

the source terminal includes an update notification section for providing a location
update message which notifies a new source terminal address after a change to a destination
terminal when ~~[[the]]~~ a source terminal address is changed, and

the destination terminal includes a destination terminal message provider for
providing ~~the source terminal address after the change with~~ a join request message to the new
source terminal address which requests addition of an address of the destination terminal
based on the location update message, the join request message requests registration of an
address of the destination terminal.

Claim 10 (Canceled).

Claim 11 (Currently Amended): A multicast-capable router used in a
communications system for forwarding a multicast packet transmitted from a source terminal
to a destination terminal in accordance with forwarding paths including a plurality of
multicast-capable routers and a plurality of multicast-incapable routers, wherein

when the multicast-capable router is a non-branch router connected to a single other
multicast-capable router on the destination terminal side, the multicast-capable router
comprises:

a message provider configured to generate a request message requesting deletion of an
address of the non-branch router and requesting registration of an address of a register target
multicast-capable router connected to the destination terminal side of the non-branch router;
and

a forwarder configured to forward the request message to the branch router connected to the destination terminal side of the non-branch router;

when the multicast-capable router is a branch router connected to a plurality of other multicast-capable routers including the non-branch router on the destination terminal side, the multicast-capable router comprises:

a forwarding destination holder configured to hold a table in which each address of the plurality of other multicast-capable routers is registered;

a forwarding destination register configured to update the table by deletion of the address of the non-branch router from the table and registration of an address of the register target multicast-capable router to the table, in accordance with receiving of the request message; and

a forwarding controller configured to generate a second encapsulated multicast packet in accordance with receiving a first encapsulated multicast packet generated by setting an address of the branch router to the multicast packet, and wherein

the forwarding controller is configured to generate the second encapsulated multicast packet by re-setting an address registered in the updated table to the multicast packet derived from the first encapsulated multicast packet

comprising:

a forwarding destination holder for holding a forwarding address associated with a timer to which the multicast-capable router forwards a multicast packet;

a forwarding destination register for registering, in the forwarding destination holder, an address of another multicast-capable router as the forwarding address associated with a source terminal address and a multicast group address; and

~~a router message provider for providing the source terminal address with a join request message which requests addition of the address of the multicast-capable router to a sending address to which the source terminal transmits the multicast packet.~~

Claim 12-16 (Canceled).

Claim 17 (Currently Amended): A communication method for forwarding a multicast packet transmitted from a source terminal to a destination terminal in accordance with forwarding paths including a plurality of multicast-capable routers and a plurality of multicast-incapable routers, the plurality of multicast-capable routers including a non-branch router and a branch router, wherein

the non-branch router is connected to a single other multicast-capable router on the destination terminal side

and wherein the branch router is connected to a plurality of other multicast-capable routers, including the non-branch router, on the destination terminal side, the communication method comprising:

generating, in the non-branch router, a request message requesting deletion of an address of the non-branch router and requesting registration of an address of a register target multicast-capable router connected to the destination terminal side of the non-branch router;

forwarding the request message to the branch router connected to the destination terminal side of the non-branch router;

receiving, in the branch router, the request message;

updating, in branch router, a table, in which each address of the plurality of other multicast-capable routers is registered, by deletion of the address of the non-branch router from the table

and by registration an address of the register target multicast-capable router to the table, in accordance with the received request message;

receiving, in the branch router, a first encapsulated multicast packet generated by setting an address of the branch router to the multicast packet;

generating, in the branch router, a second encapsulated multicast packet by re-setting an address registered in the updated table to the multicast packet derived from the first encapsulated multicast packet

comprising:

~~registering an address of another multicast capable router, which is associated with a source terminal address and a multicast group address, as a forwarding address in a forwarding destination holder for holding the forwarding address to which a multicast-capable router transmits a multicast packet;~~

~~transmitting, to the source terminal address, a join request message which requests addition of the address of the multicast capable router to a sending address to which the source terminal transmits a multicast packet; and~~

~~registering, in a sending destination holder for holding the sending address, the address of the multicast capable router as the sending address based on the join request message.~~

Claim 18 (Currently Amended): The communication method according to claim 17, wherein the source terminal registers, ~~in the sending destination holder, the~~ an address of the ~~multicast-capable~~ a branch router most located ~~most upstream on the source terminal side~~ when the source terminal address is assumed to be upstream in a multicast tree.

Claim 19 (Canceled).

Claim 20 (Currently Amended): The communication method according to claim 17, comprising:

transmitting a location update message which notifies a destination terminal of a source terminal address after a change when a new source terminal address is changed; and

transmitting, to the new source terminal address ~~after the change~~, the join request message which requests ~~addition~~ registration of an address of the destination terminal ~~to the sending address~~, based on the location update message.

Claim 21 (New): The communications system according to claim 1, wherein the register target multicast-capable router is an other branch router or an edge router,

the other branch router is connecting to a plurality of other multicast-capable routers on the destination terminal side, and

the edge router is connecting to the destination terminal.